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ABSTRACT

This report describes and evaluates the Clarifying Environments Program (CEP), an innovative attempt by the University of Pittsburgh to improve educational environments in the community through university-community interface. The first part of the paper presents the goals, theory, and history behind CEP. Implementation of CEP learning labs for elementary school children in disadvantaged community areas is explained in terms of the financial assistance, administrative work, and community and institutional cooperation required. Children ranging in age from preschool through third grade attended these labs for a half-hour each day of the week. To make CEP a community program, community leaders were consulted, and several indigenous community residents were trained as paraprofessional lab workers. Both the 1971 and 1972 evaluations of the program were affected by research or administrative problems, and the results are difficult to accurately define. The second part of the report analyzes the development of CEP. Topics discussed include: (1) the institution-building model; (2) general and specific goals; (3) working relationships and problems between CEP, its director and the school board officials, school staff, Model Cities Program, community and black leaders; (4) CEP leadership and internal structure; (5) resources; (6) personnel; and (7) conclusions. (SDH)

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THE CLARIFYING ENVIRONMENTS PROGRAM

A Case Study of a University - "Outreach" Project

by

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INTRODUCTION

As the need to find solutions to urban ills has grown, so has the pressure on major urban universities, by their constituencies, to contribute to the improvement of the urban environments. This has been the case with the University of Pittsburgh, located in an urban community faced with the problems usually associated with large urban areas. Since his appointment in 1967, Chancellor Posvar has advocated that "the University would acquire a higher order of public responsibility". The new directions have been reflected in the design of courses and programs relating to urban development and in the University's budget commitments.

As the universities have become more involved in urban affairs, much discussion has arisen as to the possible roles the universities should play in the community. In an attempt to find answers to some of the questions, the University of Pittsburgh responded by submitting a proposal to the U.S. Office of Education for a study of Pitt's interface with the community. In 1970, the University-Urban Interface Program (UUIP) was funded for this purpose, with the hope that the research findings would prove helpful for Pitt's and other universities' design of community relations.

One of UUIP's research focuses has been on the University's activities within the area of Minority and Community Services. Four so-called "Outreach Projects", representing University-based projects being implemented in the community, were selected for study, with primary focus on relations between the University, and community agencies and groups.

One of the four projects was the Clarifying Environments Program (CEP). It was selected because it provided an opportunity to study the transition from a University laboratory to community schools, and a chance to study how concepts and practice developed in a more controlled environment fared when embodied in an operational school system. The transition meant not only the implementation of a theoretical program but an organizational interface as well. Thus, the program entailed a move from the University to the community, from research to application, and multiple organizational administration, mixing the University, the Pittsburgh Model Cities Agency, the Board of Education, and private sources of support.

CEP is an innovative program which focuses on the improvement of educational environments. It was introduced in Pittsburgh in 1965, when its developer and director, Dr. O. K. Moore, joined the University of Pittsburgh as a Professor of Psychology. In 1971, the program was implemented in a Pittsburgh public school.

CEP operations represent the application of University expertise in the community. In our study of the transactions between the University and the community, UUIP research staff have chronicled CEP's development

in Pittsburgh over a period of two years (1971-72). Research has focused on the analysis and comparison of factors which have impeded or facilitated the transition of CEP from a University setting into the community as part of the public school system. CEP's development has been studied both in terms of its internal organization and its ways of relating to the community and the University. Our study attempts to chronicle and interpret the complex issues that evolved, without making judgments as to the quality or cost-effectiveness of the educational innovation itself.

Various methods were used for gathering information about CEP. During the course of the study, three CEP staff members provided CEP-UUIP liaison. The first two participant observers submitted periodic reports about CEP activities during a period of one and one-half years. The third analyst completed a more comprehensive report on the program. Two members of the UUIP research team conducted numerous interviews with Dr. Moore and other project members, as well as with individuals and representatives of groups and organizations connected with CEP, such as the Board of Education, Model Cities, and the University's Learning Research and Development Center. Project memos, proposals, published articles and correspondence provided additional information.

This report has two parts. The first is a brief description of CEP and a history of its activities in Pittsburgh. In the second part, CEP's institutional development is analyzed within the framework of the Institution-Building Model, which is briefly outlined on pages 14-15 and fully described in Appendix II.

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PART I

THE CLARIFYING ENVIRONMENTS PROGRAM:

Brief Description of Goals, Theory and History

in

Pittsburgh

PART I

The Clarifying Environments Program-- Brief Description of Goals, Theory[1] and Its History in Pittsburgh

Dr. Moore's primary interest is in theories of human problem-solving and social interaction with emphasis on learning processes and educational environments. In this framework, he has developed innovative tools and laboratories stressing improvements in education generally and programs for members of disadvantaged groups.

Four basic theoretical principles have governed Dr. Moore's design of a "clarifying educational environment". (1) The Perspectives Principle is based on the assumption that a person can learn most effectively by approaching what is to be learned from more than one perspective. In the traditional classroom, the student usually takes the role of the patient, listening to the teacher-agent. In a Clarifying Environments Laboratory (CEL), the student learns by adopting also the "agent's", the "referee's", and the "reciprocal perspective". (2) The Autotelic Principle is based on Dr. Moore's theory that learning can be done best if it can be enjoyed for its own sake, rather than the learner being dependent on rewards and punishments. (3) The Productive Principle considers learning to be more productive if the substance learned has properties which allow the learner to reason things out for himself through making deductions and inferences. (4) The Personalization Principle operates on the assumption that learning can be more effective if the environment is responsive in terms of providing immediate feedback to the learner, and if it allows him to understand how he learns.

Description of a Clarifying Environments Laboratory*

A clarifying environment is an educational environment designed to help clarify for the student what he is doing, and more generally, what is going on.[2] It is so structured as to allow the learner to work at his own pace, provide immediate feedback about the results of his efforts, and increase the students' likelihood of achieving insights into whatever task is undertaken. A typical Clarifying Environments Laboratory contains several small booths and two slightly larger rooms. In the booths, children can learn quietly and privately, at their own pace, with the help of a booth assistant or by themselves. Booths usually contain a

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[1] For a more extensive description of Dr. Moore's theories, see Appendix I.

*This section was writtem by Susan Smerd and edited by Liva Jacoby.

[2] O. K. Moore and A. R. Anderson, "Some Principles for the Design of Clarifying Educational Environments," Chapter 10 in D. Goslin (ed.) Handbook of Socialization Theory and Research, Chicago, Ill.: Rand McNally and Company, 1969.

typewriter or a combination of typewriter, tape recorder and a filmstrip machine for reading stories or watching films about black history. In order to practice math skills, the student uses a desk-top computer in one booth. The Talking Typewriter, a computerized typewriter designed by Dr. Moore, is used in many program centers, but was not part of the application in the Pittsburgh schools. It is designed to invite the learner to explore the system; to provide immediate and clearcut feedback to the learner about the results of his endeavors; and to encourage the learner to make use of his capacity for discovering relationships.

In the larger rooms the students can function in groups and compete while practicing the skills they have been learning in the booths. In this way, a child has an opportunity to assess himself in relation to the other students. Competitive pressures, however, are kept to a minimum. The learner is encouraged to develop intrinsic motivation. For this reason, grades are not given and even praise is offered in small doses only.

The students, ranging from pre-school through third grade, attend the Lab in groups of about 12 for one-half hour daily. Each year a new grade enters the program. It is Dr. Moore's belief that exposure to a Clarifying Environment for the first five years of a child's education will provide him with a solid background of basic skills and thus enhance his academic achievement and self-esteem.

Each student is rotated through the different learning experiences so that in a given week he may have been in five different booths or rooms. Upon arrival in the Lab, the student, if he is participating in an activity that requires typing, goes to a centrally-located table where his fingernails are painted to match the color-coded keys on the electric typewriters. Within five minutes, the lights in the central room are turned off, and any visitor looking into the well-lit booths or rooms through the one-way mirrors will see about 12 children working intently for the next 25 to 30 minutes. At the end of the half hour, the central lights are turned on, a signal that time is up. The children then gather at the door and are taken upstairs to their classrooms by one of the staff members.

History of the Clarifying Environments Program in Pittsburgh

During the 1950's, Dr. Moore began to develop and implement his theories of "Clarifying Educational Environments". When he was brought to the University of Pittsburgh in 1965, he had already begun work on a 20-year research plan and had set up and directed four Clarifying Environments School Laboratories. The Talking Typewriter was already in use in several other settings throughout the country. Thus, Moore had already established a reputation as an "innovator" in his field of educational theory and technology. Dr. Moore assumed a professorship in the Department of Psychology and became an associate in the University's Learning Research and Development Center (LRDC). He also took a position as a Research Associate in the Philosophy of Science Center.

A Clarifying Environments Laboratory (CEL) at the University of Pittsburgh

The implementation of a laboratory was being planned within the framework of LRDC, through which funds from the U. S. Office of Education and Responsive Environments Foundation, Inc. (REF)[3] were transmitted.

In planning for the Laboratory, Dr. Moore was in contact with the superintendent of the Pittsburgh Board of Education, who commissioned the Assistant Superintendent of Curriculum and Instruction to carry through the plans. She visited the school laboratories previously set up by Dr. Moore. An agreement was made to transport pre-school children from Letsche School to the Lab at the University. This school was selected because its children come from the most economically-deprived homes in the City. It is located in the black ghetto area - the Hill - adjacent to downtown Pittsburgh. The Hill District is Pittsburgh's oldest ghetto area. According to 1970 census figures, its population was 91.3 per cent black. The median income was then $3,430 for a family of four. Half of the area's population received public assistance.

Of 23 children who entered CEP in 1968, only three came from homes with mother and father living together. The average number of children in these homes was between five and six.[4]

The Board's responsibility was to make transportation available and to administer tests to the children for evaluative purposes. The School's Principal and parents of the children who were to participate in the program were invited to information meetings.

The Lab in the Social Sciences Building started its operation in 1968. At this time, additional funds were received from the Jack and Jill of America Foundation. In addition to two black assistants working in the Lab, six black paraprofessionals were hired during the year. Three white students volunteered to help in the Lab.

During the second year of operation, both nursery and kindergarten pupils attended the Lab. To help work with the increased number of children, three community people were hired and trained to be both assistants and lab supervisors.

A Clarifying Environments Laboratory at Letsche School

Meanwhile, plans were made to introduce the program in the public school system by setting up a lab in Letsche School. Letsche Elementary School was attended by approximately 420 children. Currently the enrollment

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[3] A non-profit organization, Responsive Environments Foundation, Inc. (REF), was established in 1962 "to apply knowledge gained in the Social sciences and in the mathematical disciplines to the improvement of education." Dr. Moore was instrumental in establishing REF, and is the Chairman of its Board.

[4] John A. Carpenter, "Overview," in Academic Competence and Self Esteem, an evaluation of the Pittsburgh Clarifying Environments Program in the Hill District, Part I, September, 1972.

is 170 black students. The Lab was to be set up in the School's basement. By having a lab in the school itself, the program would be more integrated with the child's regular classroom activities and school environment.

A decision was made to implement the program in the School on a three-year demonstration basis. The cost for remodeling and construction of the Lab was to be paid by Board funds, and the equipment by an Anonymous Donor's Fund (administered through the Board of Education). In addition, Dr. Moore received concurrent three-year grants from the Hillman and Mellon Foundations starting in 1970, which assured program continuity.

During 1970, the local Model Cities Program developed its plans for projects, and intereste was expressed in CEP as one of the few innovative education projects in the city. A proposal from Model Cities was sent to the Board, where a contract for a CEP and an LRDC project was signed in October, 1970, for the action year beginning October 1970-71. Funds were to be used for training and salaries for ten paraprofessionals to work at CEP (consistent with Model Cities priorities to involve community residents in its projects), for equipment and for the construction of a second lab for children from two other ghetto schools. Leaders of the United Black Front and other black organizations, who had visited Dr. Moore's labs in other cities and who had supported his work, gave advice as to the selection of community residents to be hired as paraprofessionals. The training of community residents in CEP added a new and logical dimension to the program, and it was Dr. Moore's aim to train indigenous people as a means to upgrade their education. Seven people were hired, who, together with the three assistants hired previously, made up an all black paraprofessional staff of ten. In addition, there were two white, volunteer Research Assistants, one black Administrative Assistant, and the Assistant Director, Dr. Moore's wife (white), who had worked in the previous Clarifying Environments Laboratories.

As was the case when the University Lab opened, parents of the children who were to attend the Letsche Lab were invited to a meeting where they received information about the program by, among other things, being shown a film about Lab activities.

When the Letsche Lab opened in January, 1971, children from pre-school up through first grade attended the Lab at the University. The first graders had been attending since the beginning of the program in 1968. All the children now transferred to the new Lab located in the School. The children were released from their classrooms each day for half an hour and were brought to the Lab by CEP staff members. Subjects of instruction included reading, spelling, typing, and math. A special component on black notables, described in the film, "Black Excellence",[5] was developed for black children and was first used for the pupils in the Letsche Lab. It comprised facts about important personalities and events in the course of Black American History. Dr. Moore's hypothesis is that exposure to this will add to the enhancement of the children's self-esteem.

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[5] O. K. Moore, Black Excellence, a 16mm sound-color motion picture, Pittsburgh, Pa.: William Matthews and Company, 1971.

Dr. Moore intended to bring the Letsche School teachers and CEP staff members together for meetings to better coordinate Lab and classroom activities. According to a participant observer, however, only a few such meetings took place because relations between the CEP staff and the School staff, including the Principal, had not developed in a positive direction. Dr. Moore indicates that CEP staff made themselves available for informal luncheon discussions on many occasions.

The Lab at the University was used for programs for gifted and for deaf children. During the Fall of 1971, a "computerized classroom" was installed in that Lab. Dr. Moore's intention was to develop it as a testing and evaluation center in order to evaluate the program objectively after five years of operation.

Expansion of CEP

Both the Model Cities and the Mellon Foundation contracts called for the implementation of new labs; the former for one in the Hill District and the latter for one in a white area economically comparable to that of Letsche School. Dr. Moore and the Board Assistant Superintendent of Curriculum and Instruction visited several schools in the city, in search of suitable space for laboratories. Space was found in a school (Schiller) in a white, lower-class neighborhood on the North Side of the city. The Principal of this School was supportive of the program. The decision was made to add a second lab in Letsche School and to bus children there from two other elementary schools nearby. Construction of the labs started in 1971. Parents of children who were going to learn in the two new labs were invited to meet with Dr. Moore, school principals, and Board representatives to be informed about the program.

Dr. Moore's plan was to have high school students help in the labs. An agreement was reached to bring students attending the high school of the Letsche district to the Letsche Lab for training as booth assistants. This was to be part of their Family and Personal Development class, and their transportation was to be funded by Model Cities. The program was to be coordinated by one of Dr. Moore's research assistants, The high school students' reading ability and their self-esteem were to be evaluated and compared with those of a control group which did not help in the Lab. In the beginning, many of the high school students came to the Lab. Later, however, administrative difficulties in the School's handling of the program precluded its continuation. CEP staff felt this was due to the lack of cooperation of the high school's Vice Principal, who did not support CEP. The Research Assistant later undertook her project at the University Lab with a group of volunteers from the high school.

During 1971, plans were made to set up an outdoor unit of CEP on a lot in the countryside, owned by Responsive Environments Foundation. Another plan concerned a mobile CEP unit, which was designed by Dr. Moore and engineers from General Motors. Due to lack of funds, these plans did not materialize.

1971 Evaluation of CEP

According to Dr. Moore, the initial tests which the Board was to administer when the first CEL opened, were never completed. The agreement between Model Cities and the Board called for an evaluation of CEP before the end of the first action year in September, 1971. One part was completed by the Board's Research Office in the summer of 1971.[6] The results of the evaluation showed no significant differences on the .05 level in academic achievement between experimental and control groups. The Board's researcher, however, in her report, cautioned against making any conclusions or decisions on the basis of the findings, since the studied sample was too small. She also pointed out that the program might have other benefits beyond improvement in academic achievement, and that these benefits might ultimately affect the academic performance of the children.

CEP staff and their consultants studied the methods and results of the evaluation and challenged the study's validity. Their points of criticism included the following: (1) there was an inadequate match of the experimental and control groups; (2) selection of the students to be tested was not random; (3) substitute teachers were used as testers; (4) black testers interviewed the control group and white testers the experimental group; and (5) some black testers prompted control group students in the tests. The match of experimental and control groups was inadequate since there were 133 children in the 23 experimental-group families, as opposed to 85 in the control group families, and only three intact experimental group familites as compared to 15 of the families of the control group. The conclusion made by the Board's researcher that the CEP had no significant effect on inner-city students' academic performance was therefore perceived as incorrect by CEP staff and their consultants. They felt it could be concluded that a significant achievement had occurred among the children in the program, since these had been compared to children with what was seen as more "middle class" characteristics, such as intact families and smaller number of children.

Thus, a controversy arose concerning the way the evaluation was conducted. Eventually, the relevant Board officials decided to term the study "incomplete," but only after it had been presented to Board members of the Pittsburgh schools as is the procedure with all research studies. According to Dr. Moore, the report was also submitted to Model Cities.

In 1971, Model Cities contracted Peat, Marwick, Mitchell and Company of Philadelphia to conduct an evaluation of Model Cities and its funded projects. The study concluded that "the O. K. Moore project, as presently structured, is doing an excellent job."[7] With respect to Model Cities, the Philadelphia researchers found its monitoring procedures to be ineffective.

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[6]The tests used for this evaluation were the Boehm Basic Concept Tests, the Wide Range Achievement Test, and the Durell Listening-Reading Test.

[7]Peat, Marwick, Mitchell and Company, Evaluation of Educational Program, Phase I, for Pittsburgh Model Cities Program, October, 1971.

Model Cities Withdrawal of Funds

In the Summer of 1971, Model Cities had allocated funds channeled through the Board for CEP for the second action year, October 1, 1971 to September 30, 1972. However, due to a political controversy between the Mayor and Model Cities, HUD appropriations were delayed and funds for all Model Cities projects suspended. By October, 1971, no contract had been signed between the Board and Model Cities concerning CEP, and it was decided that the Board would pay the necessary expenses and be reimbursed by Model Cities once its second action year plan had been approved by HUD. There was still no approval in the middle of February, 1972, when Model Cities, in a letter, had to tell its recipients of funds that the reimbursements could only be made up to February 24, unless the problems with HUD were resolved.

On February 18, 1972, a letter was sent from the Board's Office of Personnel to each paraprofessional working at CEP, referring to the letter from Model Cities and stating that "the O. K. Moore program, funded by Model Cities, will be terminated on February 24, 1972." Arrangements would be made for the paraprofessionals to be hired by the Board as teacher aides in other Pittsburgh schools.

The Letsche Lab closed on February 24 and remained so for six weeks. This crisis situation produced much discussion both within the organizations involved with CEP and in the community, as to the effectiveness of the program. Varied perceptions and viewpoints came to the foreground and the debate polarized opinions among supporters and opponents of the program. Aspects of this controversy will be discussed later in this report.

Parents' involvement with the program was expressed one day shortly after the closing of the Lab, when they demonstrated outside the School. The demonstration was filmed by television reporters. The parents then withheld their children from school for two days, threatening to continue doing so unless the Board Superintendent would meet with them to discuss the reopening of the Lab. The Letsche Parents Organization, representing approximately 60 families, voted for a group of mothers to meet with the Superintendent. CEP filmed the mothers going to the meeting and in a discussion immediately after their meeting. The parents also contacted various organizations in the Hill in order to mobilize support.

After weeks of uncertainty with no communication between the parties involved, a meeting between Dr. Moore, the Board Superintendent, and the Assistant Superintendent of Curriculum and Instruction finally was organized. A task force consisting of administrators of the Board, Model Cities, and LRDC was set up to deal with CEP's funding situation. Dr. Moore participated in two of its meetings. The discussions revealed some confusion, especially concerning CEP's funding structure. Several facts about the program and its relation to funding and operating agencies, respectively, had to be explained. After it had been clarified that the Lab could be operated without Model Cities' funds (i.e., without the paraprofessionals), the decision was reached to open the Lab again. Three of the paraprofessionals continued to work in the Lab and were paid from other sources.

1972 Evaluations of CEP

The second part of the evaluation called for in the 1970 Model Cities-Board agreement (see page 8) was undertaken at the request of Dr. Moore by a member of the Responsive Environments Foundation, who is from Rutgers University. He reviewed the Board's evaluation study of CEP and designed another using the same control group as the Board researchers had used, reasoning that if trends in the Board's data were amplified to significance after sixteen months, considering that the control group was perceived as having "middle class" characteristics by CEP staff, the benefits of CEP would be clear.

The completion of the study was postponed due to the delay of release of funds from the Board. The Board officials involved were opposed to the study being undertaken by a person of Dr. Moore's choosing. The results of the tests used in the study[8] revealed that the experimental group ranked significantly higher than the control group in reading, spelling, and arithmetic skills as well as knowledge of black history. The self-esteem test indicated that the experimental group children also felt better about themselves and were less anxious. There were no significant differences between the groups in verbal intelligence and in Black-White Beauty Preference, whereas the control group ranked higher on the test measuring creativity.

A second report, published by CEP, describes new testing and evaluation procedures, developed by Dr. Moore, as part of the Clarifying Environments Program. A "Dynamic Assessment Paradigm"[9] for the study of attitudes, was used on 76 black high school girls who were exposed to two models of advanced educational technology, one in a black context (CEP, at Letsche School) and the other in a white context.[10] This comprehensive study revealed that those who experienced CEP in Letsche School tended to feel better about themselves as blacks, about the situation of blacks,[11] and less accusatory against whites than those in the white-context group.

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[8]The following tests were used: The Peabody Picture Vocabulary Test (Form B), The Wide Range Achievement Test, Gilmore Oral Reading Test (Form C), The Piers-Harris Children's Self-Concept Scale, Revised Art Scale of the Welsh Figure Preference Test. In addition, a black history test and a Black-White Beauty Preference Scale were developed by CEP staff for the evaluation.

[9]Described by O. K. Moore in: "Statement Concerning Evaluation and Supervision Problems," Quality Control and Self-Esteem, an Evaluation of the Pittsburgh Clarifying Environments Project, in the Hill District, Part II A, December, 1972.

[10]Susan J. Smerd, "Advanced Educational Technology and the Activities of Inner-City High School Students," Quality Control and Self-Esteem, an Evaluation of the Pittsburgh Clarifying Environments Project in the Hill District, Part II A, December, 1972.

[11]Another CEP report termed, "A Clarifying Environment Approach to Creativity," was published in September, 1972. A report on the use of the Picturephone and math, instruction for paraprofessionals in forthcoming.

Since the evaluation study undertaken by the Board's Research Office in 1971 had been considered incomplete, a second study, using a different set of tests,[12] was conducted in 1972. The primary goal was to compare academic achievement of students in a treatment group to that of three control groups.

Due to a delay of appropriation of funds in the Board's Budget Office, the Research Office could not begin testing until February. Post-testing took place in May-June. Maximum exposure time for the children was, however, only one and one-half months, since the Lab was closed for six weeks. The evaluator, in her report, asked the reader to view the results with the above-mentioned limitations in mind.

The pre-testing showed no significant differences between treatment and control groups. Upon post-testing, there were significant differences (on the .05 level) in scores of a Letters and Sounds Subtest, in favor of of the CEP kindergarten group, and on the second grade Listening Subtest in favor of one of the control groups. The results from the Expressions Survey indicated that as treatment of children move up in grade, their attitudes toward CEP seem to become more positive.

CEP 1972-73

The Lab in Schiller School, located in a white poverty area, opened in September, 1972, after a long period of construction delays. At the same time, a new bussing program brought black kindergarten children to the School. Confusion arose initially as to whether these children should be included in CEP. The issues involved were misinterpreted and some ill feelings between Dr. Moore and the School and Board administrators were generated. However, the problems were resolved in meetings with the Principal, the Board Area Supervisor, the Board Assistant Superintendent of Curriculum and Instruction, and Dr. Moore. It was decided that all children would be admitted to the Lab and an additional group of white children would come in an afternoon program.

During the school year 1972-73, approximately 60 children from nursery school and kindergarten participated in the program, primarily instructed by one supervisor and one assistant from Letsche Lab. Pupils from a nearby white high school were trained to assist in the Lab and helped to operate it.

During the school year, approximately 80 children nursery through third grade attended the first Letsche Lab on a regular basis for half an hour daily. Beginning in the Fall of 1971, however, more and more children from the other grades came voluntarily to the Lab, primarily during after-school hours and participated in some instruction programs.[13]

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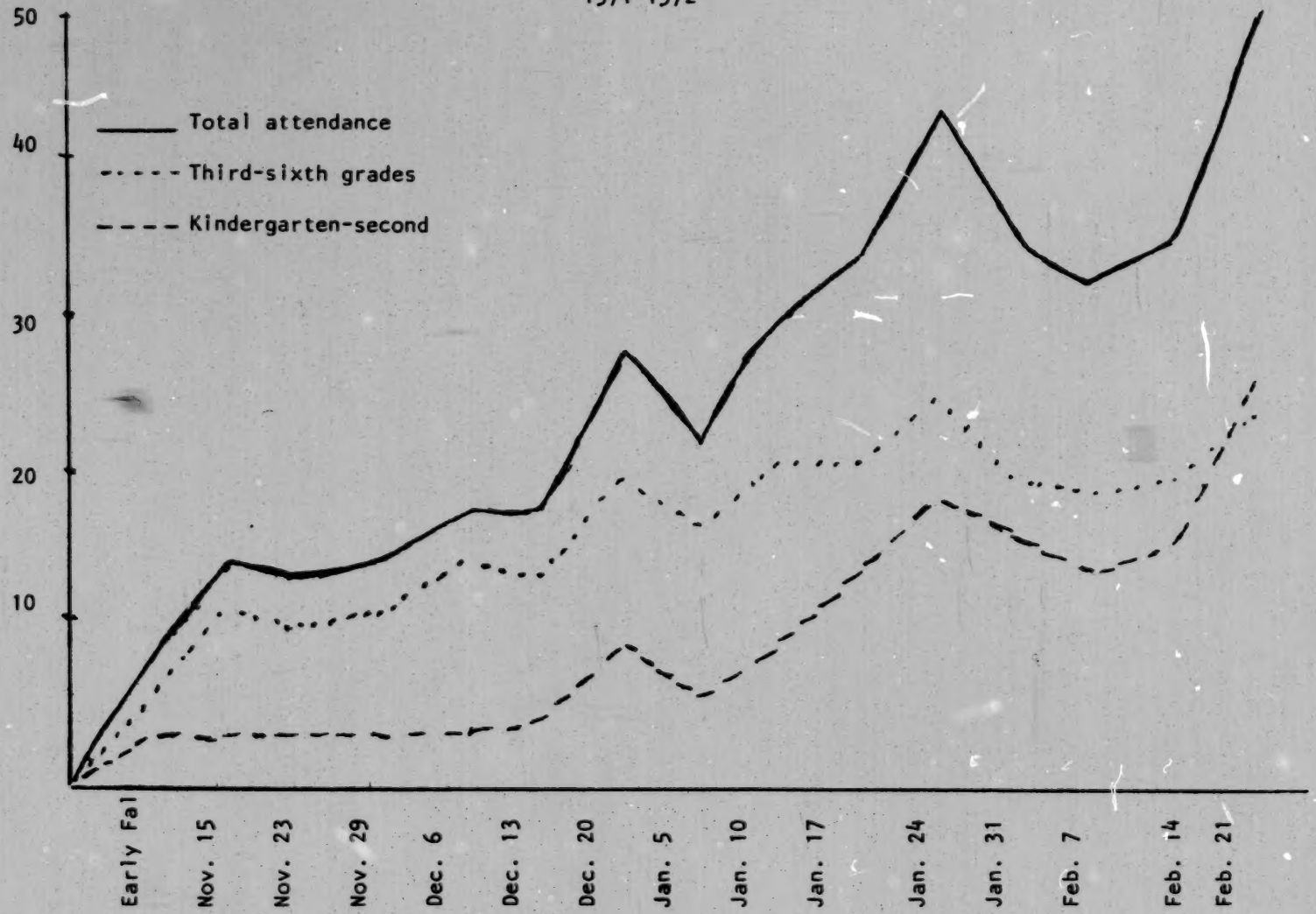
[12]The Peabody Picture Vocabulary Test, the Cooperative Pre-School Inventory, The Stanford Early School Achievement Test, The Cooperative Primary Test, and the Expressions Survey were used to measure performance and attitudes of the children.

[13]See Attendance Chart on the following page.

Letsche Laboratory After-School Participation

Five-day week averages

1971-1972



For mary children, it provided a good after-school activity.

By the end of 1972, practicially every pupil at Letsche had been involved in some Lab activities, and about sixty Schiller children attended the CEP Lab in their school. During the Spring of 1973, however, the Schiller Lab did not operate regularly.

CEP in the Spring of 1973

The 1972-73 school year completed the demonstration phase of CEP with Letsche School children. In the Winter of 1973, a task force was set up under the auspices of the Board of Education's Office of Curriculum and Instruction to review all published data on CEP and to make a recommendation to the Board Superintendent. The task force was headed by a professor of Pitt's School of Education and included other University professors and Board officials, as well as some agency personnel not a part of the University or Board of Education. In their review of the available data, they concluded that all research on the program had not been done well, and their recommendation, therefore, called for "careful research" to be undertaken during one year of program continuation. However, before the Superintendent reacted to this recommendation, Dr. Moore, in a memorandum, notified the Board of the closing of CEP at Schiller and Letsche Schools. He stated that the obligations to the funding agencies had been fulfilled. In an interview, he expressed his view that lack of trained personnel to run the labs precluded the continuation of the program in the two schools. With the withdrawal of Model Cities' funds, the majority of the lab-trained paraprofessionals had to leave the program, and the other staff members who were encouraged to continue their education reached a professional level for which other jobs were more appropriate. Dr. Moore saw it as the Board's responsibility to plan staff training for the continued operation of the labs within the public school system. However, according to the Assistant Superintendent of Curriculum and Instruction, it was assumed by the Board that Dr. Moore would train staff.

Dr. Moore stressed that CEP operations would continue within the University at the Lab in the Social Sciences Building.

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PART II

Analysis of the Development of the Clarifying Environments Program in Pittsburgh

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The Institution-Building Model

In the previous section, the historical development of CEP has been described. Some attention has been paid to its transactions and relations with other institutional entities, which have been part of the organization's institutionalization process. In the following section, this process will be analyzed within the framework of the Institution-Building Model, developed as a guide for introducing change into an existing system.[14] Institution-building is defined as "the planning, structuring, and guidance of new or reconstructed organizations which (a) embody changes in values, functions, physical and/or social technologies; (b) establish, foster and protect new normative relationships and action patterns; and (c) obtain support and complementarity in the environment."[15] Although this model was not used for the implementation of CEP, UUIP research staff found it applicable as a tool for analyzing the program's implementation process.

Viewed from the perspective of institution-building, CEP constitutes a planned innovation in the process of being institutionalized as part of the University organization and its resources channeled into the community, as well as a component of the urban public education system. The institution-building model focuses on the intra-organizational and inter-organizational elements which are relevant to the institutional development of an organization. The first group of variables (intra-organizational) includes goals, program, resources, personnel, leadership, and internal structure; the second (inter-organizational) refers to four types of linkages: enabling, functional, normative, and diffuse.

Generally, linkages can be defined as "the interdependencies which exist between an institution and other relevant parts of the society."[16] Specifically, enabling linkages are defined as those "with organizations and social groups which control the allocation of authority and resources needed by the institution to function"; functional linkages "with those organizations performing functions and services which are complementary in a production sense, which supply the inputs and which use the outputs of the institution"; normative linkages as those "with institutions which

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[14] For a full description of the Model, see Appendix II.

[15] M. Esman, "The Elements of Institution-Building," Chapter 1 in J. W. Eaton (ed.), Institution-Building and Development: From Concepts to Application, Beverly Hills: Sage Publications, 1972. Originally published in: M. Esman and H. Blaise, Institution-Building Research--The Guiding Concepts, (mimeo), 1966.

[16] Ibid., p. 23.

incorporate norms and values (positive or negative) which are relevant to the doctrine and program of the institution"; and diffuse linkages "with elements in the society which cannot clearly be identified by membership in formal organization".[17]

CEP, through its development, has had transactions with several institutions, organizations and groups within the University and the community. Depending on the particular role relationship (i.e., functional, enabling, etc.) between CEP and these linkage organizations, the interactions have varied in degrees of formality and complexity. As will be apparent, most of the linkages have performed more than one role with respect to the organizational and institutional development of CEP.

The institution-building model will be utilized to analyze the relations between these linkages and the institutional performance of CEP over time. Each intra-organizational component of CEP will be described separately. Since the linkages have had a major impact on CEP, they will be treated as sub-areas of each variable, which will be examined in terms of how it has been perceived and affected by linkage organizations and groups. The analysis deals primarily with the CEP in Letsche School.

In the following section, the goals of CEP will be described in relation to the University and the community.

General Goals

During the last decade or so, the increasing problems relating to cities have led us to speak in terms of the "urban crisis". Citizens have become increasingly active in trying to work for solutions to the problems and exert pressure for action. The response has been the allocation of large amounts of both federal and private funds for the establishment of various kinds of programs to deal with such problems as education, pollution, crime and public health.

Universities located in the large urban environments have not stayed isolated from the crises, neither in terms of problems, like riots, nor in terms of pressures to participate in their solutions. Increasingly, urban universities, with their resources and expertise, have become oriented to their environments and adopted a "public service" role. The University of Pittsburgh is no exception. The present Chancellor, when he came to the University in 1966, stated "that the University would acquire a higher order of public responsibility . . ."[18] In 1970, he said, "the University has added to its list of high priority objectives a new dimension to accompany its energetic drive for quality in educational and research activities. This includes humanizing and making more habitable the urban environment and providing opportunities for continuing the education of an ever-widening array of people."[19]

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[17] Ibid., pp. 23-24.

[18] "Report of the Chancellor, 1970," Pitt Magazine, No. 4 (Winter, 1970).

[19] Ibid., p. 1.

It was in this general normative climate that Dr. Moore came to the University of Pittsburgh as a researcher and expert in the area of advanced educational technology and methods, whose theories and goals could be well applied to the "public service" role of the University and to the research and development activities of LRDC. The overall goal of LRDC was (and is) "to improve education through a unique combination of development work directed toward products needed in the nation's schools and research work directed toward disciplines which are relevant to that development effort".[20]

In Dr. Moore's words, the long-range goal of CEP "is to create an experimentally-grounded theory of human problem-solving and social interaction".[21] The program is now in its 12th year of a projected 20-year plan of research and development. One, and for our purposes, the most relevant goal is to "design equipment and procedures in accordance with the emerging principles of theory, both to facilitate the testing of our [Moore's] theoretical constructions and for the sake of making educational applications for pressing social problems".[22] Dr. Moore has focused on the problems of the disadvantaged minority groups and their future in society and has applied his theories to improve educational environments, which he views as an essential part of bringing about changes in the larger social system.

Specified Goals

Dr. Moore's major objective is to equip children of disadvantaged backgrounds with the necessary skills and self-esteem to prepare them better to confront intellectual challenges and to improve their lives in a complex society. Specifically, his objective is to expose these children, starting on the pre-school level, to a "clarifying environment" encompassing individualized instruction and specially designed machines, methods, and courses, in order to bring them "up to national standards vis-a-vis academic performance as usually defined . . . and to go beyond these standards with respect to imparting knowledge and skills not normally taught in public or private schools".[23]

Implicit in this objective is the involvement of parents in their children's learning process in order to activate and encourage their interest in learning--both for themselves and their children. Concomitantly, community residents are trained as paraprofessionals, and CEP staff members are assisted in pursuing their educations.

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[20]Learning Research and Development Center, Basic Program Plan, Spring, 1972.

[21]O.K. Moore, "The Clarifying Environments Program," Educational Technology, 1971.

[22]Ibid.

[23]O.K. Moore, "Description of the Lower Hill District Clarifying Environments Project," in Academic Competence and Self-Esteem, An Evaluation of the Pittsburgh Clarifying Environments Project in the Hill District, for the Pittsburgh Board of Education and Pittsburgh Model Cities Agency, September, 1972.

Dr. Moore's aim is to make his innovative educational program a vehicle to bring together grassroot leaders with leaders of the "established" leadership of the community to encourage their joint effort in working on the alleviation of problems facing everyone in the city.

Two organizations which played important roles in the implementation of CEP goals were the Board of Education and the Pittsburgh Model Cities Program. The general goals of both of these linkage organizations seemed to match those of CEP.

As the pressing needs for improved quality of education, especially for ghetto children, were recognized, the Pittsburgh Board of Education responded by a growing interest in innovative education programs. In 1965, when Dr. Moore came to Pittsburgh, the Board's Superintendent suggested a special focus on new pre-school programs and expressed interest in CEP. The Board's objectives to improve education generally and for ghetto children specifically created a normative linkage with CEP. This facilitated cooperation between Dr. Moore and the Assistant Superintendent of Curriculum and Instruction, and led to the establishment of an enabling linkage, whereby CEP was introduced into the public school system. The Board also administered funds provided for CEP by Model Cities. However, certain events and developments occurred that combined to change the nature of the support which had been established.

In 1967, there was a change in Board administration, and the new Superintendent emphasized priorities that were different from the previous ones. Although this shift did not produce any immediate changes with respect to program support, over time this support became restricted to the administrative area and divorced from that of curriculum and program philosophy per se. Concurrently, the relationship between Dr. Moore and certain Board officials deteriorated, which the latter attributed to interactional difficulties. Dr. Moore, however, perceived it to be a result of the Board administration's de-emphasis of innovations and resistence to changes within the school system. In the Winter of 1972, a Board spokesman expressed skepticism concerning Dr. Moore's objective "to have second and third graders read fourth, fifth, and sixth grade material", which Dr. Moore had stated was possible on the basis of results from previous programs. There was the feeling among Board officials that it would be possible to evaluate whether these objectives had been reached or not, after a year of program operation. On that basis, a Board official referred to the first challenged evaluation undertaken by the Board's Research Office contending that there was no evidence of the "dramatic gains" which had been promised. Therefore, Board officials perceived Dr. Moore's predictions to be unrealistic and too broad; they stated the Board favored modest claims, based on careful documentation of activities and results.

The CEP relationship with Model Cities also originated through a normative goal linkage.

The federal government's Model Cities Program was a response to the need for alleviating some of the urban ills. In the area of education, the goal of the Pittsburgh Model Cities Program was to "provide a superior educational program in each school in the model neighborhood (including the

Hill area) which will produce graduates who are intellectually, emotionally, and socially competent to thrive in our complex society".[24] In this effort, it entered into a contract with the Board in 1970 and 1971, to support CEP operations. A linkage was then established on the normative level in terms of mutually supportive goals and on the functional and enabling levels with respect to funding.

However, during 1972, Model Cities experienced internal conflicts and underwent changes, whereby a shift in priorities occurred toward economic development and construction programs. Model Cities representatives expressed skepticism regarding stated objectives of CEP, implying there was a great deal of "mere rhetoric" about the program. They asked for concrete data on its proposed benefits and results on which to base a decision concerning continued financial support.

In connection with the crisis in early 1972, when the above-mentioned views came to the forefront, a spokesman from LRDC argued that it was not possible to evaluate the program, ex post facto, since clear guidelines for measuring results were lacking. These views of CEP which developed among leaders of major supporting agencies revealed skepticism toward the objectives of CEP, or at least with the program's ability to meet them. Conservative estimates, careful documentation based on clear guidelines, and concrete data on results were requested.

In the following section, we will describe how CEP goals have been translated into action, i.e., its program, and discuss how it was viewed and affected by the several linkages.

Program

As has been described in Part I of this report, Dr. Moore's goals were implemented through the establishment of three Clarifying Environments Laboratories in Pittsburgh during the last five years.

Educational tools, designed by Dr. Moore are also being used in approximately fifty various settings around the country and abroad. The scope of the overall CEP is thus large, but for the purposes of this analysis, the focus is on the program's operations in Pittsburgh. The way CEP was perceived by its linkage organizations became apparent during the crisis in February, 1972, when the Letsche Lab was closed. Much discussion arose in the community about the program and its raison d'etre. CEP's image among linkage organizations and groups and how the program was affected by them will be reviewed below.

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[24] Model Cities Agency, Outline of Four-Year Comprehensive Education Plan (mimeo), 1971.

Board Officials and Letsche School Staff

The Board's controversial first evaluation of CEP failed to show any positive effects of the program. The researcher who authored the report cautioned that no conclusions should be drawn on the basis of the results. However, Dr. Moore believes the document influenced the way Board officials came to perceive his program, citing one representative's statement in a local newspaper about the program not showing the "dramatic gains" that had been promised. Dr. Moore felt that Board administrator's permitting the poorly conducted evaluation studies to be completed by the Board's Research Office, contributed to termination of the program at Letsche. Although Dr. Moore had stated that a comprehensive evaluation of the CEP was unrealistic before the end of the five-year period that a child should be exposed to a Clarifying Environment, he encouraged interim evaluation studies of the program, and went along with the Board's regular evaluation procedures and tests. He contended, however, that the Board had failed to complete initial testing of the Letsche children and therefore lacked data on IQ and achievement from previous two-and-one-half years. In addition, he considered the Board's first evaluation study invalid and criticized the second for having been undertaken while the children were not exposed to the Lab for six weeks out of three months between pre- and post-testing and for using the same substitute teachers as testers as in the previous study. (See pages 8 and 11 .) He perceived the relevant Board administrators as not having an understanding of research and evaluation of innovation programs.

The Board administrators, on their part, assumed it possible to get evidence of program benefits through short-term evaluations without the basic data the Research Office was supposed to have collected. Apparently, there was not enough communication between Dr. Moore and the relevant Board officials in order for mutual awareness and understanding to arise. The procedures and outcome of CEP staff's regular monitoring of program activities and measurements of skills (not tapped by the Board's planned testing) which did take place, would have been important to discuss. In addition, it is Dr. Moore's belief that any "fundamental educational innovation" requires novel supervision and evaluation methods which correspond to the particular innovation. It would have been essential for Dr. Moore and Board officials to discuss these issues as part of their overall cooperation concerning CEP's operation in public schools. The experimental nature of the program, the new skills, attitudes and methods it requires, its long-term aspects and underlying theories could, thus, have been clarified and emphasized, and the program might have maintained credibility.

In the words of one official, the Board was "not moved to enthusiasm" about the program. It was the view of the Assistant Superintendent for Curriculum and Instruction that CEP did not constitute a curriculum program in that it did not represent the continuity of a total learning situation in which children spend the whole day. Children spent only half an hour in the lab where the emphasis was on exploring which the Superintendent saw as only one part of learning. CEP was perceived as being divorced from regular curriculum and classroom. This view seemed to be reflected in the development of the linkage relationship between the Board and CEP.

After 1971, when the first lab in Letsche School started its operation, the main role of the Board vis-a-vis CEP, became that of an operating agency, administering funds for the project and forwarding reports from Dr. Moore to the funding agencies. This responsibility was not part of the Board's Office of Curriculum and Instruction; and it seems, therefore, that, in effect, the Board's attention to the curricular aspects of CEP were diminished in the midst of financial and accounting matters. Dr. Moore has pointed to the fact that the Assistant Superintendent of Curriculum and Instruction and Board evaluators visited the Lab only minimally.

It was Dr. Moore's idea that children should only spend half an hour daily in the lab, but that a carry-over from the lab to the classroom should occur in order for the pupil to gain maximally. This would be achieved by linking activities in the two environments through cooperation with school teachers. There seemed to be few efforts made by the relevant Board area supervisors to gather and disseminate information about CEP and to coordinate lab and classroom activities. It had been Dr. Moore's intention to have regular in-service training sessions with his staff and the school staff in order to bring lab and classroom activities closer together. The school with its principal, teachers, and children naturally constituted one of CEP's most vital functional linkages, both in terms of input (space, children) and output (learning), and effective communication was essential. However, only a few such meetings took place. Dr. Moore and his staff perceived the Principal and the teachers as non-supportive of the CEP, and contended that plans to have children attend the Lab for the full half-hour a day were impeded. It was a fact that there had been minimum contact between CEP staff and the principal, who had been uninvolved from it since its inception in the school. The principal expressed indifference about the program, as did two of the school teachers, who were poorly informed about it. They had only visited the lab once, although they had been invited many times. They perceived it as a "non-public school" program, not making use of public school books and methods. For that reason, they saw no potential in it. They questioned Dr. Moore's motives, as well as the possibilities of helping ghetto children by extra education programs. The EP staff believed that the school staffs' indifference and uncertainty adversely influenced principals of other Hill schools, as well as the vice principal of Fifth Avenue High School. (See page 7 .)

Model Cities

The similar problem of lack of communication and information became apparent during interviews with Model Cities Education Coordinators. They were surprisingly uninformed of CEP activities in general, and had only recently (after two years of funding CEP) became knowledgeable about what aspects of CEP Model Cities was funding.

Model Cities' requirements as to progress reports from CEP via the Board varied due to changes in staff and policies. This sometimes caused unclear communication and misunderstandings between Model Cities and the Board. Other ways in which Model Cities attempted to monitor CEP apparently did not work successfully enough to provide the Education Coordinators with

the necessary information. In an evaluation of the Model Cities Agency, Peat, Marwick, Mitchell and Co. did criticize it for poor monitoring procedures and an inadequate communications system.[25] These facts, coupled with staff changes between 1970 and 1972 in the office in charge of education programs had a negative affect on Model Cities cooperation with the Board and with Dr. Moore.

Model Cities' position regarding CEP was demonstrated by the withdrawal of funds in the middle of the second action year. Model Cities officials stated that this action had been taken because the program had failed to prove itself "saleable" to the public schools, since no benefits to the children's academic achievement had been shown. More specifically, they had negative opinions about the high costs of lab equipment and the difficulty in operating the machines. They questioned the need for such advanced technical devices, contending that there was no evidence that they enhanced children's learning. They thought that intelligent children would be able to learn well in any environment, and that weaker children would not be able to use the equipment well enough to learn. They also felt that it was superfluous to train paraprofessionals in the Laboratory, as Model Cities had its own teacher training program at the University.

The reasons for these negative views and the sudden withdrawal of Model Cities support to a program whose goals coincided with those of its own are hard to trace. Some reasons might have been of a political nature, as controversy surrounded Model Cities' leadership. We also have noted a shift in Model Cities priorities. Nevertheless, Model Cities had already made a commitment to fund the program for the second action year. However, the fact that the relevant Model Cities officials were poorly informed about the program and about what aspects Model Cities was funding most likely made them more prone to skepticism.

The Community--Local Individuals and Informal Groups

Information about perceptions of CEP in the local community has mainly been obtained in indirect ways such as through the media and from CEP staff members. Interviews with parents of children attending the labs were planned, both by UUIP and CEP staff, but could not be carried out within the limits of this research effort. Our available data are thus by no means extensive and will, at best, only give a general indication of the attitude-climate among various groups and individuals in the community. This is part of CEP's diffuse linkage system.

However, CEP is connected to the local community by a strong functional linkage as well. This consists of the children who participate in the

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[25] Peat, Marwick, Mitchell and Co., op cit.

program, and without whom it could not operate. The data we have indicate that the children have enjoyed the labs. This finding has been partially confirmed by the increasing number of children who volunteered to participate in the program.

All the parents of children attending the labs were initially invited to meetings to be informed about the program. They interacted with CEP staff at various events organized in a community Center in the Hill District and in Dr. Moore's home. A Letsche Parents Organization was formed, representing sixty families. A group of representatives participated in the various meetings, according to Dr. Moore. In his view, there was a continuous interaction between the parents and his program, and this, he felt, developed strong grass-root support of CEP. This thus came to constitute a normative linkage.

The attitudes of the parents towards the program were expressed during Winter, 1972, when the Letsche Lab had to close. Parent groups then demonstrated outside the school of support of the program, withheld their children from school and arranged a meeting with the Board Superintendent to ask for the reopening of the Lab. They also contacted various community organizations on the Hill to ask for support.

It should be mentioned in this context that these parents of Letsche School children have not been active in a PTA. The school principal and a Board official are of the opinion that it is very hard to organize and activate them, and interaction between them and the school has been minimal. Therefore, when they organized in support of CEP, it was the belief of the principal and teachers that CEP staff had helped them. The parents had been informed about the crisis situation and the closing of the Lab by members of the CEP staff, and they organized then as a response to this situation. Dr. Moore for his part pointed to the detrimental aspects of the "lack of interface" between the school and the parents, emphasizing the differences with regard to his program and the importance of interacting with the parents in a way compatible with their own mode of activities, rather than through formal organizational meetings.

The relationship between parents of children at the Schiller Lab and CEP did not develop into a continuous interaction pattern. Dr. Moore attributes this to the fact that the Schiller area does not constitute a "community" in the same sense as the Hill and that many parents do not live in the school area.

Black Leaders

It has been Dr. Moore's objective to make his program a vehicle by which to connect grassroots leaders with the "established" leadership of the community. When planning his first lab in Pittsburgh, he was in contact with leaders of black community organizations, who visited his labs in other cities. Relations with United Black Front leaders were good, UBF acted as a consultant to Dr. Moore and also provided information about CEP to the community. Two other black organizational leaders stated they became involved with CEP only during the crisis period in 1972.

Relations with other influential black leaders did not develop in the same positive direction. Dr. Moore was not backed up by them, and he perceived this to be partly due to a conflict in goals. Possibly they perceived the program under his leadership to be competing with their own objectives and interests. Dr. Moore suggested that the opposition came from "extremist" groups, who not only opposed Dr. Moore as a white person working in the ghetto, but also the Jack and Jill Foundation, which they saw as representing the "establishment." He felt they were against racial integration and any constructive remedial changes within the present system. Dr. Moore connected some of the opposition to power conflicts among the black leaders. He felt they attempted to obstruct many of his plans by influencing Model Cities and Board officials in negative directions. Moreover, Dr. Moore related that he and some of his staff members had received threatening phone calls and were subject to physical threats, which, he intimated were instigated by extremist black group members. Because of such opposition, Dr. Moore is skeptical that he could have continued his work in the Hill area without the grassroot support he had developed.

As a result of the unstable environment, with conflicts of opinion and interest even among various black community groups, CEP did not develop into a vehicle by which they could coalesce and organize to achieve more unity and power.

Leadership and Internal Structure

"Leadership is considered to be the single most critical element in institution-building because deliberately induced change processes require intensive skillful and highly committed management both of internal and of environmental relationships."[26] Since the internal structure of an organization includes the patterns of authority, it is intimately linked to the variable of leadership, and will be included in this section. Dr. Moore, like many independent researchers, acted as an entrepreneur. His multiple roles involved the mobilization of the program's resources, supervision of lab operations, instruction of children and training of staff. His "visibility" in the labs fostered close working relationships between him and his staff. Each lab was set up with a supervisor, a coordinator, and booth assistants. In the organization, Dr. Moore assumed primary authority. In matters regarding program planning, a participatory decision-making process, including all staff, was used.

Besides internal management and program development, the leadership role includes that of dealing with the relevant external environment - i.e., linkages. Dr. Moore has assumed this task in what have been primarily administrative functions. Their scope has increased during the last four years, which he perceives as detrimental to the development of his program and his work as a scholar and researcher.

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[26]Esman, op. cit., p. 22

A characteristic of Dr. Moore's entrepreneurial role has been the building up of an extensive network of diffuse linkages, many of which have provided resources. For example, in his efforts to bring both grassroots community groups and upper echelon groups closer together, he has invited black community leaders and representatives from business, industry, and the media to visit the labs and to social gatherings in his home. In addition, Moore's application of the picturephone in 1971 connected the program with the downtown offices of major businesses, which used the picturephone service for communication with other businesses and customers. At CEP, the picturephone is employed "as a supervisory tool to guarantee the quality of the innovative educational techniques",[27] and as an educational tool by virtue of its reflexive properties which are in line with Dr. Moore's learning theories. (See Appendix I) Through the picturephone network in Pittsburgh, information about CEP could be transmitted to the connected industries and corporations. Other contacts have included foreign experts in education, state government officials, University administrators, and representatives of large foundations and corporations, most of whom have visited the labs. Public relations' activities have also included documentary films of CEP in operation, as well as one on the use of the picturephone, which were completed during 1971. Interviews with Dr. Moore and his staff and films about CEP frequently have been presented by local television stations. Publications of articles about CEP and presentations by Dr. Moore at meetings of professional and scientific associations also constitute diffuse linkages. In general, linkage with these "established" organizations and groups composing the diffuse linkage system have helped support CEP by adding to its image of a viable organization and in transmitting information about the program.

The objectives, many functions and specific style of Dr. Moore's leadership have led him to work as independently as possible from any existing organizational structure. This has created friction with regard to different aspects of CEP's linkages, such as LRDC, the Board, and certain groups of black leaders. Their perceptions of Dr. Moore as CEP Director will be reviewed below.

Some Linkages as They Relate to CEP Leadership

Representatives of groups and organizations linked with CEP have viewed Dr. Moore's way of operating often to be too independent and detached from their organizational structures, stipulations and interests. In this context, clarification of changes in the internal structure of LRDC and the Board are necessary.

Originally in 1965, Dr. Moore worked out of LRDC, which was CEP's major enabling and normative linkage. (See under "Goals" and "Resources") In conjunction with a shift of focus within LRDC's research activities, over

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[27] O. K. Moore, "A Warm Medium of Communication," in Bell Telephone Magazine, March-April, 1972.

the years immediately following, a change in the organizational set-up occurred whereby project activities became more integrated and management more centralized. Dr. Moore found it impractical to be part of this integration, partly due to difference in theoretical approaches and partly in sponsorships (USOE versus REF). LRDC representatives perceived Moore's attitude as indicating an unwillingness to cooperate and felt that he was "using" LRDC as a funding agency. These differing perceptions led to a deterioration in working relations between Dr. Moore and LRDC scholars, with the result that funds and bookkeeping services were withdrawn in 1971. Dr. Moore then aligned the program with the Sociology Department, in which he had held a position since 1966.

After the change of administration within the Board during the late 60's, an internal reorganization took place which led to the establishment of "area offices" for separate school districts within the city. Each office is staffed by a director of education and area supervisors who act as liaison persons between the school in the district and the Board.

Dr. Moore's contacts with the Board had almost entirely been through the Assistant Superintendent for Curriculum and Instruction and continued to be so even after the Board's reorganization, although the new rules stipulated that school contacts be with the assigned directors of education. This became a source of complaint on the part of the above-mentioned assistant superintendent, who thought that Dr. Moore was not using the designated communication channels. Dr. Moore's choice not to change channels was most likely due to what he felt had already been time-consuming experiences with a bureaucracy like the Board.

Nevertheless, these differing perceptions added to the deterioration of relations between Dr. Moore and the Board. Here, again, we have an illustration of how conflicts developed between CEP and its linkages, due to incompatibilities between changes within the latter and Dr. Moore's established work pattern and leadership style.

Resources

CEP has received various kinds of support from a number of sources and a quite complex network of enabling linkages has emerged. To make it as clear as possible, we can categorize the kinds of support or inputs into funds, equipment, and facilities, and describe the network in light of CEP's development in Pittsburgh. Linkage relationships as they relate to CEP's resources and funding structure will also be discussed.

The Lab at the University

Financial support to build the first lab was received through LRDC of the University of Pittsburgh (mainly from USOE) and through the Responsive Environments Foundations, Inc. (REF) (from the Jack and Jill of America and Carnegie Foundations). With support from the University's Chancellor

space for a lab was provided in the Social Sciences Building. Bookkeeping services were provided by LRDC and REF. The Board of Education furnished transportation for children from the Hill area to the Lab.

The Letsche Lab

Lab space in Letsche School was made available by the School Board, which funded the remodeling. Initially, an anonymous donor provided funds for equipment. Grants from the Hillman ($17,000) and Mellon Foundations ($25,000) were received in the summer of 1970 to be used for running lab operations, and were renewable for three years. The anonymous donor's grant was administered by the Board, whereas the Mellon grant was transmitted through the Board for administration by LRDC. The Hillman grant was received directly by LRDC. The contracts with the foundations called for reports by Dr. Moore about the use of monies to be transmitted both through LRDC and the Board. In the Fall of 1970, the Board entered into a contract with the local Model Cities for a grant of $127,000 for a first action year. This grant was primarily used for salaries for ten paraprofessionals who would be trained to work in the Lab, and for the construction of a second lab in the Model Area (the Hill District). As has been mentioned earlier, the contract called for progress reports on Lab activities to be delivered by Dr. Moore to Model Cities via the Board, which acted as the contractor and through which all funds were transmitted to CEP. At times there were complaints on the part of Model Cities that the required progress reports were not forthcoming. The responsible Board officials stated that there sometimes was confusion as to the requirements, due to the internal changes in Model Cities. Dr. Moore, for his part, contended that he had not been told about the contract between Model Cities and the Board, until some months after it had been signed, and consequently could not furnish any reports until then. There is no available record on when and how Dr. Moore was notified about Model Cities funding, but according to the spokesman for the Board's Office for Special Projects, Dr. Moore was aware that a contract was being signed. The above factors seem to indicate that inadequate communication did exist, and contributed to misunderstandings and difficulties in the interaction between the linkage organizations and CEP.

The withdrawal of Model Cities funds in the Winter of 1972 meant that the Lab at Letsche School had to operate without seven of the ten paraprofessionals who had been trained and paid to work in the Lab, as stipulated by Model Cities agreement with the Board. The three remaining paraprofessionals chose to continue working in the Lab, either on a voluntary basis or finding other sources of financial support. The Lab was able to continue its operations with the help of the Hillman and Mellon grants, and the remaining staff of eight people. The remaining staff had to take on a heavier work load so that the number of children attending the Lab would not have to be cut down. The withdrawal of Model Cities funds also halted the construction of the CEP second Hill Lab, thus preventing the extension of the program to children in other Hill District schools.

As has been mentioned earlier, Dr. Moore's relation to LRDC became more marginal over the years. During 1971, its financial support for CEP decreased and finally was terminated. (See page 26 for discussion on the development between CEP and LRDC) Dr. Moore then sought new sources of funding. The Department of Sociology took over bookkeeping services with the exception of the administration of the Mellon grant, which was taken over by the Board of Education.

The Schiller Lab

The contract with Mellon Foundation stipulated that part of the grant be used to operate a lab for deprived white children. During 1971, the construction of the Schiller Lab started. Space was made available by the Board which also paid remodeling expenses. Equipment for the Lab was leased from the Responsive Environments Foundations, Inc. The School principal supported the program and was interested in its implementation.

In the construction of each of the school labs (Letsche and Schiller), which were dealt with through the Board, there were delays due to difficulties concerning the kind of furnishings such as carpeting and air conditioners. In Dr. Moore's opinion, the Board's purchasing procedures were too rigid and resulted in purchases of unnecessarily expensive equipment. Relevant Board officials, however, perceived difficulties due to Dr. Moore's frequent changes in requests.

Linkages as They Relate to CEP's Resources

At certain times, it became unclear to many of the parties involved with CEP what funds were used for what purposes. As a result, uncertainty arose as to what degree contract stipulations were followed and allocations were appropriate. Complaints were expressed by both Board and Model Cities officials that Dr. Moore did not sufficiently adhere to directives regarding the use of funds and the furnishing of progress reports.

Part of the problems and misunderstandings very likely stem from complex funding structure. A number of funding sources and separate administration of funds by different organizations existed. Dr. Moore was answerable to a number of entities and responsible for delivering reports to them directly and to others via the Board, which acted as a contractor. In addition, as we have seen, the internal communications system, the monitoring procedures of, and the structural changes in these linkage organizations had an adverse affect on the interaction and understanding between the parties involved.

Much of the available information is contradictory, which underscores the complexity of the funding situation and partly explains the misunderstandings and criticisms among those involved.

Personnel

Before funds were received from Model Cities at the end of 1970, nine people worked for the CEP. These included one administrative assistant, two lab supervisors, four booth assistants, the assistant director, and the director. All were trained by Dr. Moore and participated in the instruction of the children in the lab. Four were white and five black. Two of the booth assistants (white) were volunteer graduate students.

Model Cities funds were used for hiring seven community residents to be trained to work as paraprofessionals in the Letsche Lab. Some of the jobs previously held by these new staff members included truck driver, sales girl, and hospital night attendant. Two of the men were trained to be lab supervisors, one for Letsche Lab and one for the planned Schiller Lab. Dr. and Mrs. Moore conducted intensive training, which included instruction methods, the operation of machines (among others a desk computer), and math. The two graduate student volunteers were later hired as research assistants who, together with the administrative secretary (also a student), were encouraged and assisted in their continuing education at the University.

The CEP personnel thus consisted of a heterogeneous group of people with varying occupational, educationak, racial, and religious backgrounds. The training program and common focus engendered a strong esprit de corps and commitment to program goals among the staff members. As a result, the group's cohesion enabled them to deal effectively with internal problems.

However, when Model Cities funds were withdrawn from CEP in 1972, the seven CEP paraprofessionals left to accept positions offered by the Board. The remaining staff viewed this as a sign of insufficient idealism. The relevant Board official stated that the paraprofessionals had felt upset about having to leave CEP, but that they were unable to continue without financial support. Dr. Moore later related that the Board had refused to pay them to remain in the Lab. Most of the paraprofessionals later left the jobs offered by the Board, and UUIP did not have the opportunity to gather information as to how they felt about the program.

Summary and Conclusions

CEP has been analyzed in terms of its institutionalization as a University program in the community. In Pittsburgh, Dr. Moore's work has focused on the improvement of educational environments for members of disadvantaged backgrounds. The Clarifying Environments Program which he developed in the beginning of the 1960's while still at Yale University was implemented here, first by the establishment of a laboratory at the University and later at two schools--Letsche and Schiller--in economically deprived areas of the city. The program's orientation towards serving the community made it compatible with Pitt's commitment to a higher order of public responsibility and a normative linkage was produced between CEP and the University. Another normative linkage developed with the Board of Education whose Superintendent encouraged experimental innovation programs.

The Board's objectives to improve education generally and for children from disadvantaged backgrounds specifically corresponded to CEP goals and those of the local Model Cities Program, which entered into a contract to financially support CEP operations. Thus, a three-way enabling linkage was established between Model Cities, the Board of Education, and CEP.

Although the general goal of improving education for the disadvantaged was supported by the Board and Model Cities, skepticism developed around some of Dr. Moore's predictions about the lab-children's achievements. Part of this skepticism might have been due to lack of knowledge about CEP theories, goals, and objectives. In terms of institution-building, "doctrine . . . acts on the external environment projecting an image of the organization, the values for which it stands, and the services or benefits that it can be expected to deliver to its various linkages or clients."[28] It is essential to note the difference between CEP's general and specified goals, the latter fulfilling only part of the overall goals. Developing new educational theories and techniques and improving the educational environment and opportunities for disadvantaged children are goals generally supported in today's society. However, if specified goals seem unclear or unrelated to these general goals, it becomes necessary for the innovator to carefully state realistic and clearly specified goals, put in relation to his program's overall thrust and society's norms. This is especially crucial in a situation where an innovative program is dependent on formal evaluations and refunding by established institutions.

It is especially a problem for a program like CEP, being a fundamental innovation program, which requires new knowledge and attitudes on the part of those connected with it, as there often is resistence to something new and different. In such a case, the risk of an organization losing its credibility and becoming separate from existing institutions is greater. It seems that extended communication would have been valuable between Dr. Moore and Board area supervisors, who acted as liaisons between the Board and the schools. In this way, exchange of information with the school teachers could have been facilitated and helped bridge the gap between CEP and the regular classroom. Better communication between the two environments could not only have added to the child's total learning experience, but also helped diminish the image of CEP's separateness and thus helped towards its institutionalisation.

When Model Cities funds for CEP were withdrawn in the winter of 1972, the problem of lack of communication and information between the parties involved became further apparent. The novel aspects of an innovative organization introduce and require new knowledge and changed attitudes on the part of its environment. As a result, elements of uncertainty might be expected to develop in this environment. Therefore, it is not only necessary that the innovator provides sufficient information about his activities but essential that he is informed about the climate of opinion in such groups and to evaluate the status of the relationships. This is especially necessary in order to anticipate changes

[28]Esman, op. cit. p. 29

or problems and to be better prepared to deal with them. In the case of CEP, Model Cities withdrawal of funds came as a surprise to Dr. Moore. Funds had been forthcoming through the Board according to the plans for the second action year, but when they were cut off, Model Cities officials stated that the plan had been to fund CEP as a demonstration project on a one-year basis only. Had the interactions between the two organizations been more frequent and more informative, it is possible that the situation might have been less contradictory and confusing. The funds might have been cut anyway, but Dr. Moore at least might have been better prepared, and a crisis situation would not necessarily have evolved. The use of a few staff members to act as special liaisons with the major linkages might have proven advantageous. The issues mentioned above point to the extensive tasks and responsibilities of the leader in building an organization.

It is possible to distinguish between two types of leaders: "(a) the initiators--persons who are actively engaged in the formulation of the doctrine and program of the institution, and (b) the executors--persons who direct the operation of the institution."[29] During the history of CEP, Dr. Moore has assumed both of these leadership functions and has demonstrated an independent and visible leadership style. He has been the prime developer of theories and design and has trained staff and supervised lab operations. His role of academic entrepreneur has included the mobilization of financial resources and the attempt to bring together grassroot leaders and upper echelon groups. In this way, he has built up an extensive network of diffuse linkages in the community. Support from the "established" sector manifested itself, for example, in wide media coverage of CEP activities and in financial contributions from large private foundations. Parents of Letche children expressed their involvement and support through their concrete actions during the crisis period in 1972 when the lab closed. Strong and visible leadership to develop positive relations with these segments was essential for the program's viability, especially as cooperation from some black leaders was lacking. This was partly due to their resentment against Moore's direct and independent action in the community. Thus, Dr. Moore has had to play several roles as director of CEP. He perceives his academic work role as having been limited due to the required administrative and management tasks. Dealings with the large bureaucratic organizations such as the Board and an unstable organization such as Model Cities naturally produced difficulties and misunderstandings. Concomitant with universities' encouragement to channel their resources into the community, support would have to be furnished to those faculty members who offer their expertise in community programs. The aid of a strong and flexible organization in providing staff for budget management, progress report expediting and other administrative functions could have proven helpful to Dr. Moore, especially considering CEP's complex funding structure.

Consistent with Model Cities objectives to involve residents in programs in their communities, altogether ten indigenous paraprofessionals were hired and trained in the labs. They were a valuable

[29] Jiri Nehnevajsa, "Methodological Issues in Institution Building Research," in J.W. Eaton (ed.), op. cit., p. 31.

addition to the program and provided an important link with the community. Although one of the important aspects of CEP was Dr. Moore's emphasis on the staff's upgrading and continuation of their education, he felt that the training of as many as seven paraprofessionals at one time was a demanding task. The inclusion of the paraprofessionals was seen as a positive feature by the Board. However, in a situation where staff training requires large investments (which often is the case with innovation programs) its relationship to the program's primary output has to be evaluated realistically.

With regard to the training of staff for CEP, better communication and joint planning between CEP and the Board would have been necessary. It seems that during the last year of program operation, each party assumed staff training for the future of the program to be the responsibility of the other. The training of one or more public school teachers to work in the program might have provided not only valuable staff, but also a natural link with the schools and the regular classroom. This was thought of as a possibility by the Board's Assistant Superintendent of Curriculum and Instruction, but it was never discussed with Dr. Moore.

Our analysis has revealed the complexity of problems and issues which evolved with CEP's transition into the community. Relating this process to the notion of institution-building (see p. 15), Dr. Moore (1) planned, structured, and guided and organization which (2) embodied changes in values, functions, and technologies and which established and protected new normative relationships and action patterns. The third element, that of obtaining support and complementarity in the environment seems not to have been sufficiently realized during the five years of operations for the program to be institutionalized as a University "outreach" project integrated in public schools.

It is possible to point to ways in which Dr. Moore might have facilitated the implementation of the program in the schools; however, support, especially with administrative tasks, would have been needed. The responsibility of the Board of Education was to be the vehicle for the institutionalization of CEP. However, it appears that mutually unmet and perhaps incompatible expectations, administrative snarls, insufficient communication and joint long-term planning impeded effective cooperation between the Board and CEP. Our analysis suggests that if University "outreach" programs are to be implemented in the less controlled and more complex environment of the community, more care must be exercised by all parties in planning and implementation.

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APPENDICES

APPENDIX I

Explication of Theories Relating To The Clarifying Environments Program*

Dr. Moore works within the general framework of problem-solving and social interaction. Historically, he sees man as being with considerable powers of abstraction who has developed models of society's most serious recurrent problems that have helped orient him in his world and enabled him to deal with it. These "folk models" include puzzles, games of chance, games of strategy and aesthetic objects, and they are not so much taught as they are learned, with considerable pleasure, too, in a playful, non-threatening setting.

That certain "games," e.g., roulette and poker, can be considered models of serious activity is indicated by the existence of probability theory and the theory of games of strategy. If folk models as abstractions of life's serious matters play a role in the socialization process, then Dr. Moore finds it reasonable to assume that they could also play an important role in the development of social personality. For example, the participant in the folk models or games takes a specific stance or perspective with each one. In a puzzle he controls the action and thus takes the agent perspective. A game of chance forces him into the passive role or patient perspectice. In games of strategy he must be able to see himself as his opponent does, adopting the reciprocal perspective. And in appreciating aesthetic objects, the viewer must evaluate or judge, taking the referee's perspective.

A socialized human being will probably employ all four of these perspectives in problem-solving, examining a given problem from several perspectives. His skill in problem-solving may very well be related to his ability to adopt these different perspectives singly or in a variety of combinations.

Dr. Moore believes that if societies find folk models (and the use of different perspectives implicit in them) so successful in teaching members about serious matters, these models and the rules which govern their being learned may have some important things to tell us about educating the young.

The first three principles upon which Dr. Moore has designed his educational settings are directly related to the notion of folk models and the rules which govern learning them. The fourth principle is based upon the need for a new dynamic folk model that will inculcate the intellectual flexibility necessary to cope with a rapidly changing society.

The Perspectives Principle: The underlying assumptions on which CEP operates is that a learner can learn more rapidly and deeply if whatever is to be learned can be approached from as many perspectives and combina-

*This section was written by Susan Smerd of CEP and edited by Liva Jacoby

tions thereof as possible. Concomitantly, a learning environment will be more powerful if it lets the learner start off with whatever perspective he begins with and then allows him to shift from one to another.

In a clarifying environment, it is recognized that children do not have a short attention span but rather a short perspective span. The traditional classrooms take place in a learning environment in which the teacher is usually the agent and the learner generally the patient. In the CEL where the process is analyzed from the perspectives point of view, it is seen that learning entails listening and reading (patienthood), speaking and writing (agency), determining whom the audience will be before one writes or speaks (agent-reciprocal) or distinguishing among various sources of messages that come to one (patient-reciprocal). The two latter cases require looking at one's behavior from someone else's point of view.

To teach children to distinguish among the various targets of their messages and discriminate among the sources of messages that come, the tape recorder is used extensively. A child has the opportunity to type messages he sends and that others, such as the booth assistants, send him. The most complex perspective, that of referee, is practiced when a child evaluates his own work. If, for example, he cannot hear what he has spoken into the tape recorder, he will have to realize the need to speak more clearly. He has judged his own work and realized he has not met certain criteria. In order to become referees in regard to the overall communication process, not just as it is related to themselves, the children are given the task of publishing a newspaper. In this way they not only use their communication skills, but they have the opportunity to set critical standards suitable to their intended target or audience. In general, Dr. Moore believes that adopting different perspectives leads to learning which is complex and durable.

The Autotelic Principle: Dr. Moore believes that the learning of skills can best be done in an environment in which the learner is afforded physical and psychological safety so that the learning can be enjoyed for its own sake. The child is given an opportunity in the laboratory to explore the environment in the absence of significant adults, e.g., parents, teachers, so that he is under no pressure to perform for anyone but himself.

The booths in which he works are designed for privacy and are completely enclosed except for a one-way mirror above the level of the child for supervisory purposes. One of the tools used, the Talking Typewriter, invented by Dr. Moore, is carefully designed to ensure the child's safety so that it is unnecessary to have a booth assistant with him. This enhances the child's sense of privacy and freedom. Parents, though invited to observe the Lab, are not allowed to watch their own children and do not receive reports about their children's progress. The rules are simple and help define the environment as autotelic. First, a child does not have to come. Second, he may leave when he wishes. Since children tend to believe what other children tell them, the oldsters are asked to explain and show the Lab to the newcomers and to explain the rules to them.

Not all learning activities should be made autotelic, but certainly those should in which the complex symbolic skills are being newly acquired. At this point in the education process learning takes place best in a

playful environment, although later efforts should be subject to the real risks of competition. The child who has the opportunity to learn the basic skills in an autotelic environment before he must test himself in serious competition will begin to exhibit a high degree of self-motivation and confidence in his ability. He will be less anxious about finding the "correct" answer and more eager to discover the interesting problem.

The Productive Principle: One thing is considered more productive than another if it has properties that permit the learner to reason things out for himself. For example, an ideographic system of writing such as Chinese is less productive than an alphabetic system. For example, in English there is a code which, once understood, allows the learner to write what is spoken and read what is written.

This principle invites a careful examination of the code which is to be broken so that spoken language can be related to written language. In fact, the symbols we use to denote the sounds we make are less than adequate. The twenty-six letter alphabet is overworked.

One method employed at the Lab that does make the most of the relationship of the alphabet to the sounds of the language entails spelling a word quickly for the child. Children are encouraged to spell words out loud, and it is interesting how often the spoken letters conjure up the sound of the whole word.

The Personalization Principle: This principle has two conditions: (1) The responsive condition: The environment must be one that is responsive to the learner's activities. It should permit him to explore freely, giving him a chance to solve a problem. It provides rapid feedback to the learner about the results of his actions. It allows the learner to work at his own pace and is so structured that a learner is likely to make interrelated discoveries about the problem under investigation.

Dr. Moore's talking typewriter is designed to meet these conditions. Its operation allows the learner to explore the symbols and conventions of English orthographic system: upper and lower case, punctuation, left-to-right and top-to-bottom conventions. It provides a voice so the learner can explore the relationship between spoken and written language. If a learner types DOG the machine can be programmed to speak the letters and the word in response, thereby providing immediate feedback to the learner. The machine will not respond to another act of typing until the connection between the first typed letter of word and its spoken equivalent is made clear.

The Talking Typewriter, unlike the machines in programmed learning systems which are constructed mainly for drill, allows the learner to discover relations. The child's fingers are color-coded to match the keys so by striking the right keys with the right fingers he will learn correct fingering. The upper and lower case keys have finger lights which can be turned on or off or made to blink and which signal the two basic states of the typewriter, encouraging a learner to be aware of the distinction by himself as he manipulates the typewriter.

In order for the learner to make a series of interconnected discoveries, the machine can be made to change the "rules of the game." For example, after a child has had free range of the typewriter and has learned the names of the letters, the supervisor, by means of remote control, can confront the learner with a more challenging problem, such as matching specific letters on the keyboard with a word flashed on the screen of the typewriter. To encourage discovery it should be up to the learner to realize something has changed and to work out the "new rules" of the game. (2) The reflexive condition: Learning is seen as more rapid and thorough if the learner can see himself as learner. Future learning is made easier if a learner can understand how he goes about doing it. Athletic coaches have made more use of reflexive devices in instruction than have classroom teachers, using films of the athletes' performances as teaching devices. In a Clarifying Environment, video tapes are made of a learner's performance and are used to give a learner an understanding of himself as learner over time, so that he can see himself adopting the various perspectives and begin to learn how to learn.

Another reflexive device has been recently added to the Clarifying Environment Laboratories: The Picturephone. This small apparatus resembles a portable television set with an invisible receiver above the screen. Two people communicating via the Picturephone can see each other or, if they choose, themselves as they are seen by the other. In this way, the Picturephone allows each person to become aware of his own interactional behavior, a feature which, according to Dr. Moore, presents very important research opportunities for studying the nature of people's self-image. Used as a teaching tool, it meets the "reflexive condition" by permitting the pupil to view himself as a learner and thus gain knowledge about his own learning process. Moreover, Picturephone service is employed by Dr. Moore as a supervisory tool in the labs. This is part of and particular to CEP and Dr. Moore believes that "in the realm of supervision . . . the Picturephone set may find its most fruitful application in the educational field."[1] This statement refers to the very essential idea of Dr. Moore's, mentioned earlier, about the use of the Picturephone "as a supervisory tool to guarantee the quality of the innovative educational techniques."[2]

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[1]O.K. Moore, "A Warm Medium of Communication," in Bell Telephone Magazine, March-April, 1972.

[2]Ibid.

APPENDIX II

The Use of the Institution-Building Model for University-Urban Interface Research

An overall research framework was deemed necessary for the UUIP research in order to compare findings across program areas and to pull the many pieces of separate research projects into an integrated whole.

The UUIP research staff's decision to use the institution-building framework was based on three major assets of the model. (1) The assumptions and theorems underlying the model are compatible with the philosophy of the University-Urban Interface Program. (2) The variables focused upon in the model are of a universal nature and can be applied to the varied projects which UUIP was assessing. And (3), several of the original developers of the institution-building model are associated with the University of Pittsburgh and were available for consultation.

The Assumptions of the Institution-Building Model

An institution, such as the University of Pittsburgh, is established to fulfill needs of a society. When an institution no longer fulfills the needs adequately or is challenged to fulfill additional needs not heretofore undertaken, new ways or innovations are developed to meet those needs. How the University can respond to the demands for more involvement in the plight of the city was the subject of UUIP research. Although there were many demands for leadership roles for University involvement, the majority seemed to feel the University should work with the community not for the community. This is the explicit philosophy behind the I-B model.

> This concept of development assistance represents a clear-cut break with the concept of charity which involves a quite different approach to help-giving.Charity was a strong element in the precursors of modern development administration - the missionaries. Many of them went abroad primarily to do good deeds, while meeting their need to save the souls of persons whom they regarded as less fortunate... ...in return for acceptance of their creed, missionaries were willing to give gifts in resources, skills, ...Modern aid ...is given to a social system.....by development of new organizations which can perform innovative functions affect-many people. (Eaton,1972:139)

In UUIP research efforts, the University is viewed as a resource rather than a charitable organization.

Innovative efforts can be developed within the existing institution or planned outside of the institution. These innovative activities may become passing fads or may be "institutionized", either in the form of some new organization or as a routine way of operating within the parent institution. The institution-building (I-B) model focuses on the elements of organizational process that must be considered when introducing a planned change into a system.

> While I-B is not a universal model of social change, it does apply to innumerable situations in contemporary societies in which (1) change agents, usually enjoying some measure of offical sponsorship...impress their goals .....on society; (2) ....the proposed innovation must be induced ...not coerced; (3) formal organizations are employed as the media or vehicles through which change agents develop the technical capacities and the normative commitment needed to guide, sustain, and protect the intended innovations. (Esman in Eaton, 1972:25)

The model has been largely applied to change in underdeveloped countries. However, the generic nature of the major variables of the model make it a useful model for the guidance or study of more established institutions. This use of the model has, to the present, been largely untapped. The model also has been considered more for guidance of social planners and practitioners of change rather than those standing apart to monitor an attempted change. The UUIP research staff decided, however, that the utility of the model in , at the least, aiding the systematizing of copious data being amassed in its project could outweigh the lack of experience in using the model to analyze induced change in an established American institution and for purely research purposes.

> A principle theorem of institution building is that new service programs are most likely to become adopted .... when they are a part of an organized or patterned way of doing things ....(Eaton, 1972:139)

This institutionalization aspect of planned innovations was of particular interest to the UUIP research focus, and led to application of the I-B model as a framework for the project. Some of the research questions were (1) what kind of innovative programs introduced within the University became a part on accepted University patterns of activity; (2) what appears to make the difference in the success or failure of a project; (3) and what is the relationship between a university-based project and the community with which it interacts?

Nehnevajsa gives the following tests of institutionality: (Eaton, 1972:14)

> (1) An organization's ability to survive.
>
> (2) Extent to which an innovative organization comes to be viewed by its environment to have intrinsic value, to be measured operationally be such indices as its degree of autonomy and its influence on other institutions.
>
> (3) The extent to which an innovative pattern in the new organization becomes normative for other social units in the larger social system.

None of the innovative programs which were studied by UUIP had specifically set out to use the I-B model as a guide for organization building. The use of the I-B model for UUIP research, then, becomes one of applying the concepts for an analysis of the programs, apart from any role in the implementation of those programs.

The Variables of the Model

The model focuses on seven basic issues in the development of an institution: the goals and doctrines; the programs; leadership; personnel; resources; organization or internal structure; and linkages with the external environment.* Each of these issues is viewed from three perspectives or mappings. The "blueprint" mapping focuses on the plans as stated in organization charts, budgets, program specifications, or stated goals. The second mapping, operations, calls for data concerning what is actually happening as the attempt is made to carry out the blueprints. The third focus is "image" mapping, which looks at the perceptions that relevant constituencies have about the seven issues. The emphasis on the three mappings make the I-B model especially useful for UUIP research because the purpose was to find out not only what the University is doing in terms of university-community relations, but how people perceive that university action.

*There are several variations of the institution-building model and most of the recent discussions subsume "personnel" under resources or internal structure. However, UUIP research found it more useful to consider personnel as a separate issue.

Institution-Building Variables

	Blueprint or Normative Mapping	Actual Operating Mapping	Image Mapping
Goals and Doctrine			
Programs			
Leadership			
Personnel			
Resources			
Organization or Internal Structure			
Linkages			

The first six variables call for data concerning the properties of the program which is the target of the investigation. Each of these six variables call for three types of mapping. The UUIP staff formulated work sheets which facilitated keeping track of data relevant to each cell of the variable matrix and the time period of a particular state of any of these variables. (see next page)

The first row deals with data about the goals and doctrine of the innovative programs. This data for the blueprint mapping was usually available through the goal specifications stated in a funding proposal or in a brochure or other official hand-out paper which gave the purpose of the organization. These same documents also usually yielded statements which gave clues as to the ideology supporting the program. The cell calling for "actual goal" was used for information about aspects of the goal being implemented as indicated by resource allocation, statements by program implementors, or in progress reports. The images of the goal were assessed by interviews of persons both within and outside of the program.

The leadership of a program has been shown to be crucial in many studies of development. The blueprint mapping used by UUIP was often taken from job descriptions or by interviews of those with the authority to hire a new director. The research staff's assessment of the personality characteristics of a leader was included as part of the operations mapping; this information was gathered through direct observation or through interpretation of events. Other people's view of the particular leader was considered image mapping.

Although the I-B model often includes "personnel" as part of the "resources", for the university setting the analysis of personnel was more useful as a separate category. For example, several of the projects studied trained paraprofessionals and graduate students. The relations between these two types of personnel was often central to program problems needing solution. Also, the divisions in perceptions of university roles between administrators, faculty, students, alumni, trustees, and other publics was more than a resource related situation.

The program itself was described in proposals of offical memoranda, but often upon participant observation was different than the blueprint. Most of the image mapping for these program variables consisted of state-

INSTITUTION BUILDING WORK SHEET

Area of Description: _____ Name: _____

Time of Description: _____ Date Written: _____

		Blueprint or Normative Mapping	Actual Operating Mapping	Image Mapping
1	Specified Goals			
	Ideological Doctrine			
2	Programs			
3	Leadership			
4	Personnel			
5	Resources			
6	Organization or Internal Structure			

ments from "outsiders" as to what they thought the program was doing.

The resource categories were heavily laden with funding data, as this became the crucial problem in most of the UUIP observed programs. However, the apparent priority given a program by the University was also assessed through the kind and amount of space and materials allotted to a program.

The internal structure of a project proved to be particularly complex to follow because formal organization charts were not only out of date, but rarely reflected actual practice or informal networks. Because all of the UUIP projects were interacting with many University departments and community groups, the organization was complex, often experimental and ever-changing. Much of the decision-making and implementation was done through informal processes which were very difficult to trace.

The linkages are a major thrust of the I-B model and of UUIP research.

> Change agents must both (a) build technically viable and socially effective organizations which can be vehicles for innovation, and (b) manage relationships (linkages) with other groups on whom they depend for complementaries and support and whose behavior they are attempting to influence. Building viable organizations and managing their linkages are closely interrelated aspects of a single institution-building process. (Esman in Eaton, 1972:25)

In order to begin to understand the effect of these community relations on the institutionalization of any program, the nature and history of the linkages between program and the larger University and those outside of the University became of paramount concern.

The I-B model distinguishes between four types of linkages. Each of the types describes a kind of relationship between the target program and external organizations or groups.

Enabling linkages refer to those bodies which have control over the program in the form of allocation of resources and decision-making authority which directly relate to the facilitation of the program. In UUIP research this type of linkage includes funding agencies, the Chancellor's office. and often, in a less direct way, state and federal policy makers.

The functional linkages include those which constrain or support project activity, such as departmental faculty, neighborhood organizations, and competing programs. Katz describes this type of linkage as "encompassing the flows of resources and products necessary for carrying on the systems activities ...". (Eaton, 1972:157)

The normative linkages deal with values, such as what do certain constituencies expect of the University and the specific programs; what roles are compatible with accepted customs; what constraints are placed upon the institution by laws? Some of this type of data was gathered through surveys of University groups, alumni, and the general public. Other material was gathered through image mapping data which implied accepted norms and values.

The diffuse linkages include the many other sources of support of opposition which may not be directly linked to the program but nevertheless have an impact. This category would include the local news media and public opinion information. Diffuse linkages often served as the miscellaneous category when an item did not seem to really fit in one of the other definitions.

The research task requires identification of specific patterns of interdependence. With the identification of linkages, consideration must then be given to the actual and possible impacts which change in the linkage relationships might make upon the institution building process. A final task is to determine the impact which intra-organizational adaptations might have upon the nature of the linkages. (Nehnevajsa, n.d.)

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